

PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

Safety and Enforcement Division
Rail Crossings and Engineering Branch
Rail Crossings Safety Section

RESOLUTION SX-120
Date: June 23, 2016

RESOLUTION

RESOLUTION SX-120 GRANTING AUTHORITY TO EXPOSITION METRO LINE CONSTRUCTION AUTHORITY, ON BEHALF OF LOS ANGELES COUNTY METROPOLITAN TRANSPORTATION AUTHORITY, TO DEVIATE FROM THE PROVISIONS OF SECTION 9.5 OF COMMISSION GENERAL ORDER 75-D BY MODIFYING THE AUDIBLE COMPONENT OF THE GRADE CROSSING WARNING DEVICES AT THE BARRINGTON AVENUE AT-GRADE HIGHWAY-RAIL CROSSING OF THE EXPOSITION CORRIDOR LIGHT RAIL LINE IN THE CITY OF LOS ANGELES, LOS ANGELES COUNTY.

SUMMARY

By letter dated March 29, 2016, and pursuant to Section 13.1 of California Public Utilities Commission General Order 75-D, the Exposition Metro Line Construction Authority, on behalf of the Los Angeles County Metropolitan Transportation Authority, requests authority to deviate from Section 9.5 of California Public Utilities Commission General Order 75-D, which requires the railroad crossing warning device system to sound the bells during operation. The Exposition Metro Line Construction Authority proposes to shorten the bells sounding duration by silencing them when the warning device gate arms are in the horizontal position. The crossing device warning lights will continue to function throughout the entire warning operating cycle; however, the bells will silence once the gates are fully deployed and in the horizontal position.

Exposition Metro Line Construction Authority is requesting the exemption at the Barrington Avenue at-grade highway-rail crossing, identified as Commission No. 084S-111.10, along the Exposition Corridor Light Rail Transit Project-Phase 2 alignment.

BACKGROUND

The Exposition Corridor Light Rail Transit Project-Phase 2 (Expo Phase 2) extends approximately 6.7 miles from the terminus of Phase 1, at the Venice/Robertson/Washington aerial station in Culver City, to downtown City of Santa Monica. The Expo Phase 2 consists of 27 crossings. Eleven of the crossings are grade-separated, while the remaining 16 are at-grade crossings. Nine of the at-grade crossings are located on semi-exclusive right-of-way and are equipped with standard highway-rail crossing warning devices that include flashing light signals, four-quadrant gates, pedestrian gates, swing gates, fencing to channelize pedestrians, and bells. The remaining seven at-grade crossings are located along a street-running alignment on Colorado Avenue in downtown City of Santa Monica, and are controlled by traffic signals, dedicated train signals, and active "TRAIN" light emitting diode warning signs. Since light rail vehicles (LRV), motor vehicles, bicycles and pedestrians are controlled by the traffic signal systems along the street-running portion of the Expo Phase 2 project, crossing bells are neither required nor necessary.

The Exposition Metro Line Construction Authority (Expo Authority) requests the exemption at the Barrington Avenue at-grade highway-light rail crossing (crossing) along the semi-exclusive right-of-way alignment, to mitigate the noise to adjacent residential neighborhoods. Single and multi-family residential areas are located in close proximity of the crossing.

Los Angeles County Metropolitan Transportation Authority (Metro) plans to operate LRV service seven days a week, with LRVs ultimately operating on five-minute headways during peak periods. Metro service currently begins at 4:00 AM and ends at 2:00 AM daily with extended hours on weekends.

DISCUSSION

Community concerns regarding noise from the sounding of bells and other audible warning devices at at-grade crossings is not new. The issue has been

previously addressed by the California Public Utilities Commission (Commission) and several light rail agencies. The development and expansion of light rail transit systems has increased these concerns and the Commission's Safety and Enforcement Division (SED) Rail Crossings and Engineering Branch (RCEB) is working with California's light rail transit agencies to address the concerns without degrading safety at-grade crossings.

Section 9.5 of Commission General Order (GO) 75-D states:

"Audible Warning Devices. Bells or other audible warning devices shall be included in all automatic warning device assemblies (except as provided in Section 10) and shall be operated in conjunction with the flashing light signals. See American Railway Engineering and Maintenance of Way Association's *Communications and Signals Manual of Recommended Practice* for reference."

The modification of the automatic crossing warning devices will allow the bells to sound when triggered by the approaching LRV, while the gate arm is moving from the vertical to the horizontal position. The bells will stop sounding once the gate arm reaches the horizontal position. At this point, the absence of an audible alert from the crossing warning devices will be mitigated by the sounding of the LRV's onboard audible warning in accordance with Commission General Order (GO) 143-B Sections 3.04 and 7.09 and Metro's established rules and procedures.

Expo Authority's request for this exemption is in accordance with guidelines found in industry standards promulgated by the Federal Highway Administration (FHWA) and the American Railway Engineering and Maintenance of Way Association (AREMA), and therefore consistent with the provisions of Section 9.5 of Commission GO 75-D referencing that standard.

FHWA's Railroad-Highway Grade Crossing Handbook: Chapter IV(I) (9), page 110, states in part "When gates are used, the bell may be silenced when the gate arms descend to within 10 degrees of the horizontal position. Silencing the bell when the train reaches the crossing or when the gates are down may be desired to accommodate residents of suburban areas."

Part 3.1.15(E)(10) of the AREMA Communications and Signals Manual of Recommended Practices states: "Pedestrian bell or other audible warning device shall sound for the duration of the warning system activation, except when gates

are being raised, unless otherwise determined by the Diagnostic Team or ordered by a public agency.”

The Commission granted Metro deviations from the bell silencing requirement in the past for a number of their Pasadena Gold Line and Expo Phase 1 crossings. Expo Authority and Metro believe that the exemption sought at the crossing, for silencing the bells when the gates reach the horizontal position, is a practical and reasonable approach for mitigating noise in the community, and that safety will not be compromised if the exemption is granted.

RCEB has reviewed and analyzed Expo Authority’s request. RCEB recommends that the requested exemption from the requirements of Commission GO 75-D, Section 9.5 be granted. RCEB will coordinate with Expo Authority and witness testing of the modified audible warning systems.

NOTICE

On May 19, 2016 the Expo Authority request was published in the Commission’s Daily Calendar.

COMMENTS

The draft Resolution of the Commission’s SED RCEB in this matter was mailed in accordance with Section 311 of the Public Utilities Code and Rule 14.2 (c) of the Commission’s Rules of Practice and Procedure. No comments were received.

FINDINGS

1. Expo Authority requests authority for a deviation from the requirements of Commission GO 75-D Section 9.5 to silence the crossing warning device bells, after the gate arms reach the horizontal position, at the Expo Phase 2 crossing at Barrington Avenue (CPUC No. 084S-111.10) in the City of Los Angeles, Los Angeles County.
2. Expo Authority’s request for this exemption is in accordance with guidelines found in industry standards promulgated by AREMA and therefore consistent with the provisions of Section 9.5 of Commission GO 75-D referencing that standard.

3. Commission staff has reviewed Expo Authority's proposal and finds that the request is a practical and reasonable approach for mitigating noise in the community and safety will not be compromised.
4. Commission staff will coordinate with Expo Authority to witness testing of the modified audible warning system.
5. Commission staff recommends that this resolution be adopted.

THEREFORE, IT IS ORDERED THAT:

1. Exposition Metro Line Construction Authority, on behalf of the Los Angeles County Metropolitan Transportation Authority, is granted authority to deviate from Section 9.5 of California Public Utilities Commission General Order 75-D, by shortening the bell sound duration on its warning devices, by silencing the bells when the gate arms reach the horizontal position, at the Barrington Avenue at-grade highway-light rail crossing, identified as CPUC No. 084S-111.10 in the City of Los Angeles, Los Angeles County.

The following requirements shall apply to the modification of the crossing warning devices at Barrington Avenue:

2. The automatic crossing warning devices shall continue to operate for a minimum of 20 seconds prior to the light rail vehicle reaching the crossing, and gate arms must be in the fully down (horizontal) position prior to the light rail vehicle arrival at the crossing.
3. The crossing warning device bells shall continue to sound until the gate arms reach the horizontal position.
4. Exposition Metro Line Construction Authority shall notify the City of Los Angeles and the California Public Utilities Commission's Rail Crossings and Engineering Branch when the modifications to the crossing warning devices are completed.
5. Exposition Metro Line Construction Authority shall coordinate with Rail Crossings and Engineering Branch for the testing of the audible warning devices. Rail Crossings and Engineering Branch shall witness testing and

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compliance with applicable California Public Utilities Commission requirements and this Order.

6. The California Public Utilities Commission's Safety and Enforcement Division is delegated the power to rescind the authority granted by this resolution under the following conditions:
 - a) If Los Angeles County Metropolitan Transportation Authority modifies the number, type, and functionality of the standard warning devices at the crossings without prior California Public Utilities Commission approval.
 - b) If the light rail vehicle operators do not sound an audible warning device when approaching the crossing, as required by Section 7.09 of General Order 143-B.
 - c) The California Public Utilities Commission's Safety and Enforcement Division is authorized to temporarily suspend the authority granted by this resolution subsequent to any collision, or near collision, while the California Public Utilities Commission's Safety and Enforcement Division is investigating whether a causal link exists, pending the findings of that investigation, if the California Public Utilities Commission's Safety and Enforcement Division suspects that light rail vehicle involved collisions, or near collisions, at the crossing may have been caused by any of the authority granted by this resolution.
 - d) If the California Public Utilities Commission's Safety and Enforcement Division determines that light rail vehicles involved in collisions, or near collisions, at the crossing have been caused by any of the authority granted by this resolution, the California Public Utilities Commission's Safety and Enforcement Division Director is authorized to suspend the authority granted by this resolution.

This resolution is effective today.

I certify that the foregoing resolution was duly introduced, passed, and adopted by the California Public Utilities Commission at its regularly scheduled meeting on June 23, 2016. The following Commissioners voted favorably thereon:

/s/ TIMOTHY J. SULLIVAN
TIMOTHY J. SULLIVAN
Executive Director

MICHAEL PICKER
President
MICHEL PETER FLORIO
CATHERINE J.K. SANDOVAL
CARLA J. PETERMAN
LIANE M. RANDOLPH
Commissioners